

# HEALTH TRACKING SYSTEM



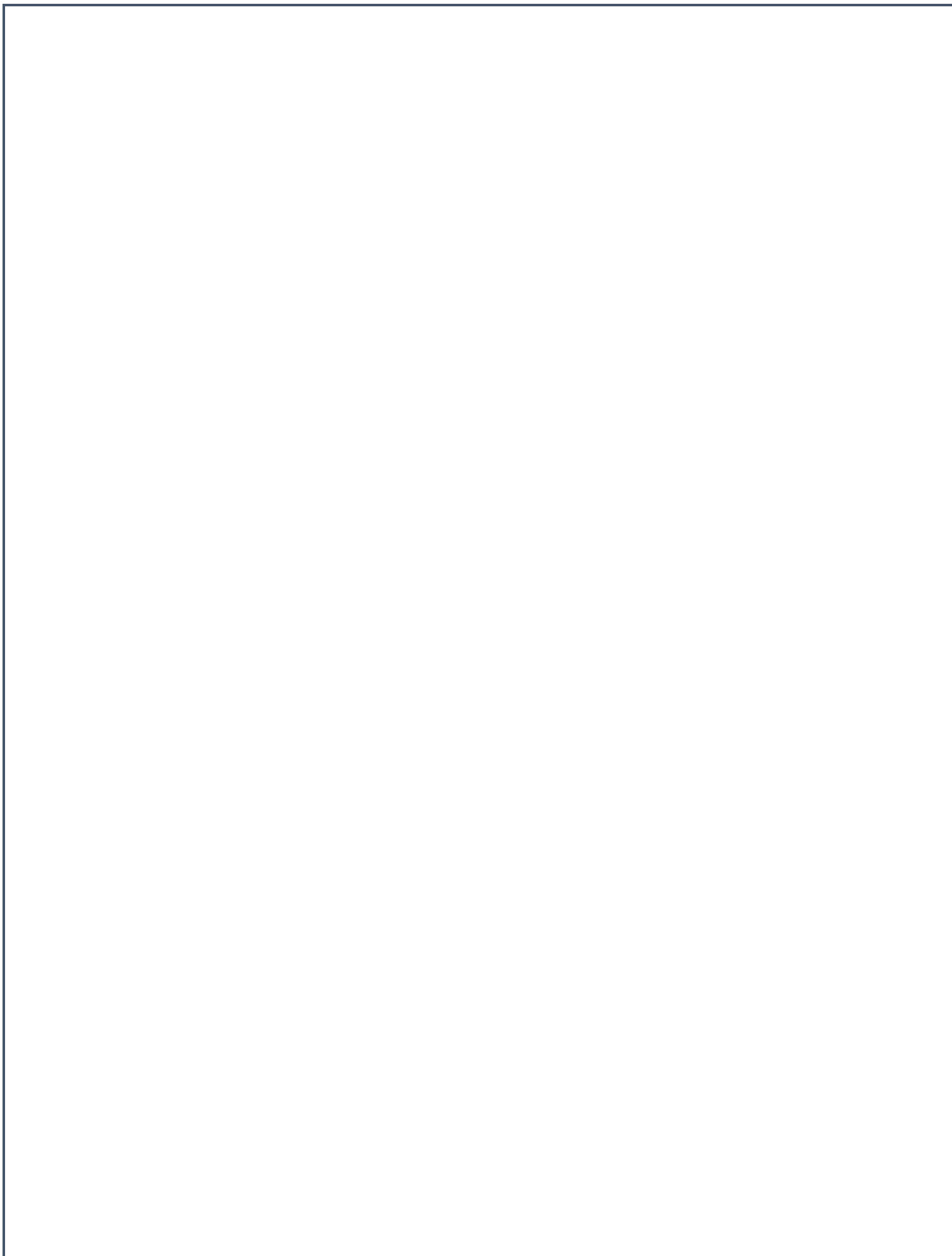
CPIS-334 | Introduction to Software Project Management

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## 1-Purpose of the Project (Project Initiation):

Creating a healthy lifestyle and maintaining it is an important issue that can tremendously affect all aspects of our daily lives. People usually face many challenges when they try to live a healthy lifestyle, such as financial costs, time, and pressures. The purpose of our project is to develop a system that can help people to achieve their goal of living a healthy life.

Perfect Fit is a web-based application that provides support, knowledge and planning to its users in order to achieve a healthy lifestyle. The system encourages people to incorporate exercise and healthy food into each day by providing many useful tips and information. Also, it provides an extensive database that contains many exercises and healthy recipes.

In addition, the system tracks the meals, exercises, and sleep of the user by being connected to Apple health, google fit, my health, my steps, and other apps. Also, it helps the user to reach and maintain a healthy weight by counting and tracking his calories and encouraging him to follow a healthy diet.

## 2-Goals and Objectives (Project Charter & Scope Statement):

The Goals and objectives of our project are:

### 2.1. Goal:

- Save time and effort for the user who tries to live a healthy lifestyle.
- Facilitate the process of tracking the user's movement, water drinking, and sleeping times.
- Help in counting and tracking calories.
- The system enables the user to get healthy recipes very easily.
- Encourage the user to live a healthy life by providing useful tips and information.

### 2.2. Objectives:

- Allow the user to choose diet recipes and exercises that suit him.
- Connecting to other health apps such as Apple Health, Google Fit, My Health, My Steps, and other apps to track the user's movement, water drinking, and sleeping times.
- Providing notifications that remind the user to exercise, drink water, sleep early, etc.
- The user can schedule times to do exercises.
- The user can schedule the times of the meals.

## 2.3. Project Charter:

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**Project Title:** Health Tracking System

**Project Start Date:** 23-10-2022

**Project Finish Date:** 7-3-2023

**Budget Information:** The project sponsor allocated 130,000 SAR for this project. The majority of the cost will be on software engineering, and most of the work will focus on executing phases.

### **Project Manager:**

Khalid Abdullah Al-Zahrani, (+966)547827428, [Zahrnikalid@gmail.com](mailto:Zahrnikalid@gmail.com)

**Project Objectives:** Development of the Health Tracking System to enable users to track their health by calculating and tracking their calories at any time. The system also will be connected with other health apps such as Apple Health, Google Fit, My Health, My Steps, and other apps to track the user's movement, water drinking, and sleeping times. In addition, the user can obtain many exercises, healthy recipes, and tips about how to live a healthy life. The system allows the user to schedule exercise times and meals. Also, the system sends notifications to remind the users to do exercises, drink water, sleep early, etc.

### **Main Project Success Criteria:**

Our project will be successful by satisfying the triple constraints:

- Time: Complete the project within the estimated date of 30 April 2023.
- Cost: Complete the project within the estimated budget of 130,000 SAR.
- Scope: Applying the appropriate risk management strategies for all project processes to handle unexpected problems.
- Quality: Gain customer satisfaction and assurance about the project.

### **Approach:**

- Build an extensive database that contains recipes for diet methods and exercises.
- Connect the system with other health apps like Apple Health, Google Fit, and others to track exercises, meals, and sleep times.
- Design a user-friendly interface that provides several diets and exercise recipes suited for the user.
- Provide notifications to remind the user during the day about the scheduled times of meals, water drinking, and exercises.
- Measure the software performance and quality using some techniques, and test the software multiple times to ensure it is error-free.

### Roles and Responsibilities (Stakeholder Register):

Name	Role	Position	Contact Information
Khalid Abdullah Al-Zahrani	Sponsor	CEO of The Health Tracking Company.	<a href="mailto:khalidabdullah@gmail.com">khalidabdullah@gmail.com</a>
Ahmad Alamri	Project Manager	Management	<a href="mailto:ahmadalamri_@gmail.com">ahmadalamri_@gmail.com</a>
Fatima Ali Omar	Software Engineer	Programmer	<a href="mailto:fatima20ali@gmail.com">fatima20ali@gmail.com</a>
Nuha Mohammed	Software Engineer	Programmer	<a href="mailto:mohamnada@gmail.com">mohamnada@gmail.com</a>
Nada Abdurahman	Web Designer	Technical	<a href="mailto:nada_00abdul@gmail.com">nada_00abdul@gmail.com</a>
Reem Alghamdi	Analyst	Technical	<a href="mailto:reemalgh_@gmail.com">reemalgh_@gmail.com</a>
Osama Ali Salim	Quality Control Engineer	Technical	<a href="mailto:osamaali9@gmail.com">osamaali9@gmail.com</a>
Zyad Ahmad	Technical lead	Technical	<a href="mailto:zyadahmad_@gmail.com">zyadahmad_@gmail.com</a>
Khalid Abdullah	Finance Manager	Management	<a href="mailto:khalidabdulla8@gmail.com">khalidabdulla8@gmail.com</a>
Saleh Alharbi	Human Resources Manager	Management	<a href="mailto:alharbisaleh@gmail.com">alharbisaleh@gmail.com</a>

### Scope Statement:

This project will require many databases that contain the user's information, exercises, and recipes. To store the information we will need a database server. Also, the project requires connecting to the tracking applications that are used to track the user's movement, sleep, etc.

## 3-Work Breakdown Structure (WBS)

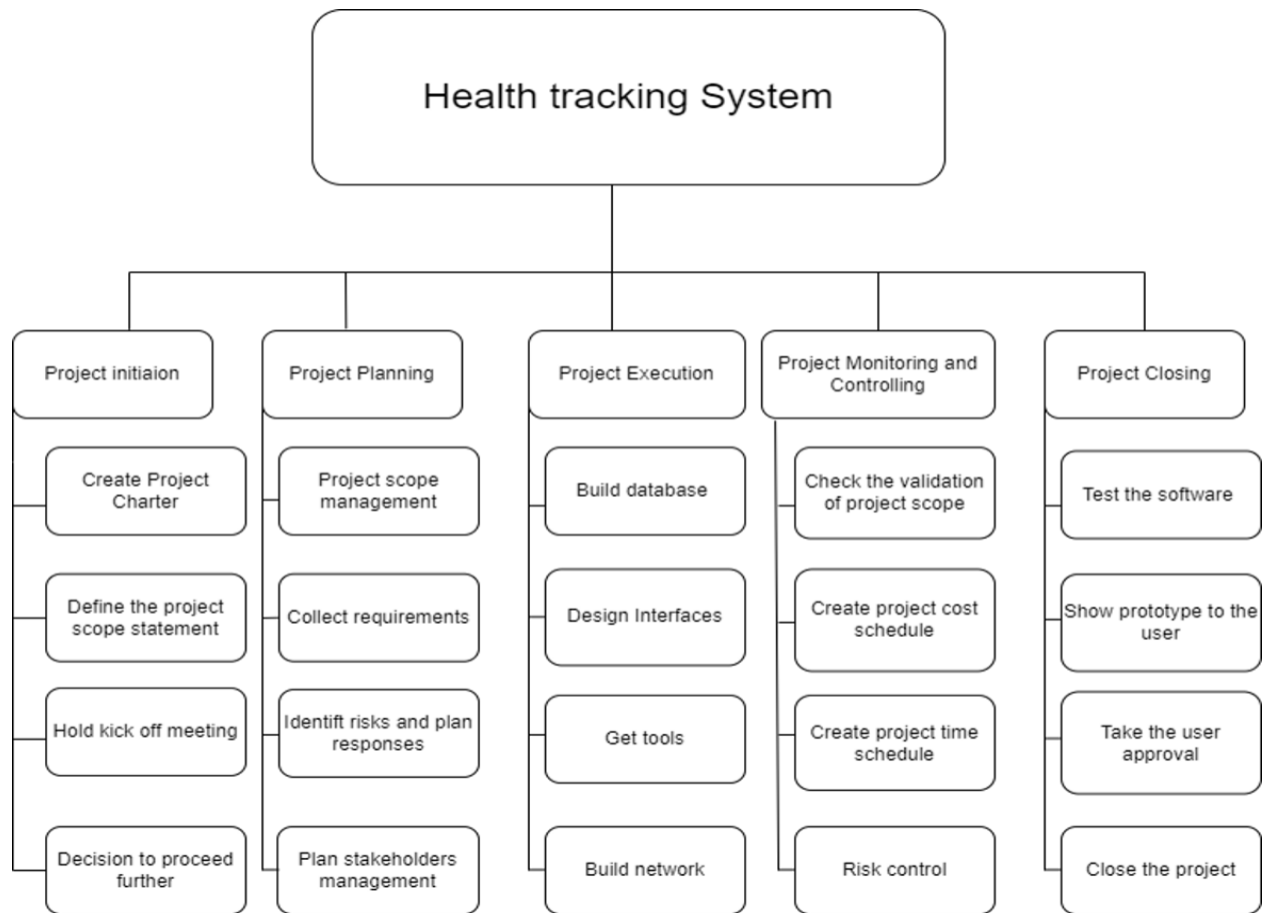


Figure 1: WBS for the system



4- Use of Precedence Diagram Method (PDM) to construct project schedule network diagram (Project Scheduling)

#### 5- Staffing Procedure and Plan (HR Management):

- 1- Design an advertisement about the job that includes all skills and experience required for the project.
- 2- Post the advertisement on social media applications and freelancing websites.
- 3- Evaluate the applicant's CVs depending on skills and experience years.
- 4- Conduct interviews and choose who have the required requirements and skills.
- 5- Familiarize employees with the project scope and work environment.

#### 6- Organizational chart and histogram (HR Management)

## 7-Major Project Milestones (Demonstrate using MS Project)

Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Add New
	<b>Health Tracking System</b>	<b>96 days</b>	<b>Sun 23/10/22</b>	<b>Tue 07/03/23</b>			
✓	Project Initiaion	9 days	Sun 23/10/22	Wed 02/11/22			
✓	Create Project Charter	5 days	Mon 24/10/22	Sun 30/10/22			
✓	Define the project objectives	2 days	Mon 24/10/22	Tue 25/10/22			
✓	Define the project approach	3 days	Tue 25/10/22	Thu 27/10/22			
✓	Create the skateholder register	1 day	Sun 30/10/22	Sun 30/10/22			
✓	Define the project scope statement	1 day	Mon 31/10/22	Mon 31/10/22			
✓	Hold kick off meeting	2 days	Tue 01/11/22	Wed 02/11/22			
✓	Decision to proceed further	0 days	Wed 02/11/22	Wed 02/11/22			
	Project Planning	20.88 days	Thu 03/11/22	Thu 01/12/22			
	Project scope management	2 days	Thu 03/11/22	Mon 07/11/22			
	Collect requirements	4 days	Tue 08/11/22	Mon 14/11/22			
	Define project scope	2 days	Tue 15/11/22	Thu 17/11/22			
	Create work break down structure	3 days	Sun 20/11/22	Wed 23/11/22			
	Plan quality management	1 day	Wed 23/11/22	Wed 23/11/22			
	Identift risks and plan responses	5 days	Thu 24/11/22	Wed 30/11/22	15		
	Plan stakeholders management	1 day	Thu 01/12/22	Thu 01/12/22			
	Project Execution	36 days	Tue 06/12/22	Wed 25/01/23			
	Build database	14 days	Tue 06/12/22	Sun 25/12/22			
	Desgin the database ER	4 days	Tue 06/12/22	Fri 09/12/22			
	Implement the database with SQL	6.88 days	Sun 11/12/22	Mon 19/12/22	20		
	Test the data base SQL code	4.88 days	Tue 20/12/22	Sun 25/12/22			
	Design Interfaces	8 days	Mon 26/12/22	Thu 05/01/23			
	Design menus	2.88 days	Sun 08/01/23	Tue 10/01/23			
	Get tools	5 days	Wed 11/01/23	Tue 17/01/23			
	Build network	4 days	Tue 17/01/23	Sun 22/01/23			
	Link data	3 days	Mon 23/01/23	Wed 25/01/23			
	Project Monitoring and Controlling	14 days	Thu 26/01/23	Wed 15/02/23			
	Check the validation of project scope	3 days	Thu 26/01/23	Mon 30/01/23			
	Create project time schedule	3 days	Tue 31/01/23	Thu 02/02/23			
	Create project cost schedule	2 days	Sun 05/02/23	Mon 06/02/23			
	Cost checking	1 day	Tue 07/02/23	Tue 07/02/23			
	Risk control	3 days	Wed 08/02/23	Sun 12/02/23			
	Manage team members	3 days	Mon 13/02/23	Wed 15/02/23			
	Project Closing	13 days	Thu 16/02/23	Tue 07/03/23			
	Test the software	5 days	Thu 16/02/23	Wed 22/02/23			
	Show prototype to the user	2 days	Thu 23/02/23	Sun 26/02/23			
	Take the user approval	2 days	Mon 27/02/23	Tue 28/02/23			
	Train the user to the system	5 days	Wed 01/03/23	Tue 07/03/23			
	Close the project	0 days	Tue 07/03/23	Tue 07/03/23			

Figure 4: Major project milestones

## 8-Detailed Project Schedule (MS Project):

1. Enter general project information, such as the project name and start date.

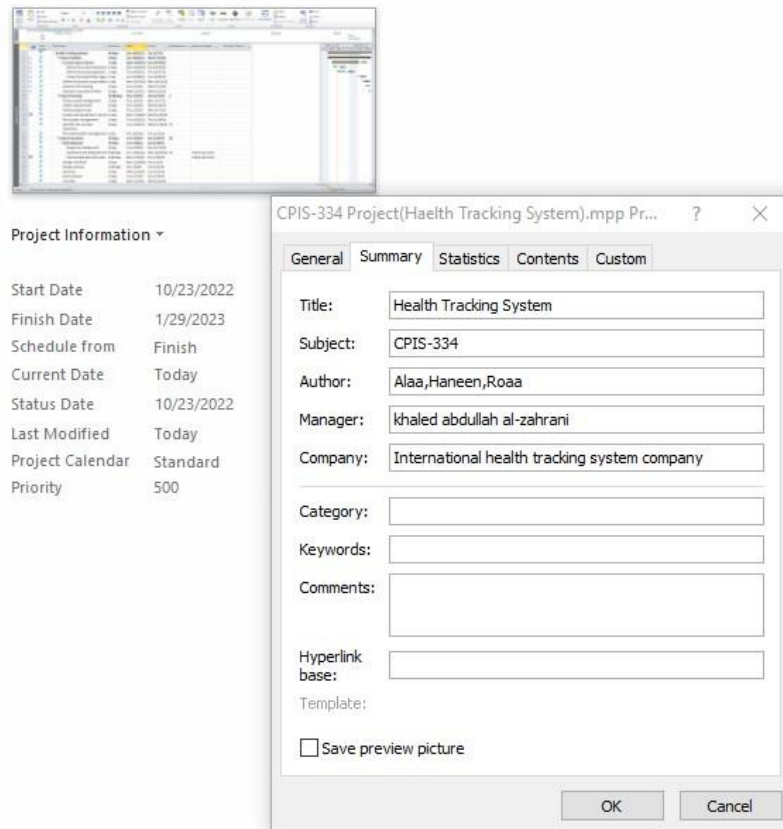


Figure 5: Question 1 picture.

2. Make calendar settings for your project based on your organization's work & nonworking days.

Change Working Time

For calendar: The Health Tracking System Create New Calendar ...

Calendar 'The Health Tracki...' is a base calendar.

Legend:

- Working
- Nonworking
- 31 Edited working hours
- On this calendar:
- 31 Exception day
- 31 Nondefault work week

Click on a day to see its working times:

October 2022

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Working times for October 23, 2022:

- 9:00 AM to 5:00 PM

Based on:

Default work week on calendar 'The Health Tracki...'

Exceptions

Name	Start	Finish
1 [Default]	NA	NA

Details...  
Delete

Help Options... OK Close

Change Working Time

For calendar: The Health Tracking System Create New Calendar ...

Calendar 'The Health Tracki...' is a base calendar.

Legend:

- Working
- Nonworking
- 31 Edited working hours
- On this calendar:
- 31 Exception day
- 31 Nondefault work week

Click on a day to see its working times:

February 2023

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Working times for February 28, 2023:

- 9:00 AM to 5:00 PM

Based on:

Default work week on calendar 'The Health Tracki...'

Exceptions

Name	Start	Finish
1 Saudi Founding Day	2/2/2023	2/2/2023

Details...  
Delete

Help Options... OK Cancel































Figure 6: Question 2 picture.

### 3. Enter the names of summary tasks (Phases).

		Task Mode	Task Name	Duration	Start	Finish
1			Health Tracking System	96 days	Sun 10/23/22	Tue 3/7/23
2	✓		Project initiation	9 days	Sun 10/23/22	Wed 11/2/22
10			Project Planning	20.88 days	Thu 11/3/22	Thu 12/1/22
18			Project Execution	39 days	Tue 12/6/22	Sun 1/29/23
28			Project Monitoring and Controlling	14 days	Thu 1/26/23	Wed 2/15/23
35			Weekly Review Meeting	75 days	Mon 10/24/22	Mon 2/6/23
52			Project Closing	15 days	Tue 2/14/23	Tue 3/7/23

Figure 7: Question 3 picture.

### 4. Enter the names of subtasks.

		Task Mode	Task Name	Duration	Start	Finish
1			Health Tracking System	96 days	Sun 10/23/22	Tue 3/7/23
2	✓		Project initiation	9 days	Sun 10/23/22	Wed 11/2/22
3	✓		Create Project Charter	5 days	Mon 10/24/22	Sun 10/30/22
4	✓		Define the project objectives	2 days	Mon 10/24/22	Tue 10/25/22
5	✓		Define the project approach	3 days	Tue 10/25/22	Thu 10/27/22
6	✓		Create the stakeholder register	1 day	Sun 10/30/22	Sun 10/30/22
7	✓		Define the project scope statement	1 day	Mon 10/31/22	Mon 10/31/22
8	✓		Hold kick off meeting	2 days	Tue 11/1/22	Wed 11/2/22
9	✓		Decision to proceed further	0 days	Wed 11/2/22	Wed 11/2/22
10			Project Planning	20.88 days	Thu 11/3/22	Thu 12/1/22
11			Project scope management	2 days	Thu 11/3/22	Mon 11/7/22
12			Collect requirements	4 days	Thu 11/3/22	Wed 11/9/22
13			Define project scope	2 days	Thu 11/3/22	Mon 11/7/22
14			Create work break down structure	3 days	Mon 11/28/22	Wed 11/30/22
15			Plan quality management	2 days	Tue 11/22/22	Thu 11/24/22
16			Identify risks and plan responses	8 days	Tue 11/22/22	Wed 11/30/22
17			Plan stakeholders management	1 day	Thu 12/1/22	Thu 12/1/22
18			Project Execution	39 days	Tue 12/6/22	Sun 1/29/23
19			Build database	39 days	Tue 12/6/22	Sun 1/29/23
20			Design the database ER	4 days	Tue 12/6/22	Sun 12/11/22
21			Implement the database with	6.88 days	Sun 12/11/22	Mon 12/19/22
22			Test the database SQL code	4.88 days	Mon 1/23/23	Sun 1/29/23
23			Design Interfaces	8 days	Mon 12/26/22	Thu 1/5/23
24			Design menus	2.88 days	Sun 1/8/23	Tue 1/10/23
25			Get tools	5 days	Wed 1/11/23	Tue 1/17/23
26			Build network	4 days	Tue 1/17/23	Sun 1/22/23
27			Link data	3 days	Mon 1/23/23	Wed 1/25/23






































		Task Mode ▾	Task Name ▾	Duration ▾	Start ▾	Finish ▾
28			 <b>Project Monitoring and Controlling</b>	<b>14 days</b>	<b>Thu 1/26/23</b>	<b>Wed 2/15/23</b>
29			Check the validation of project scope	3 days	Thu 1/26/23	Mon 1/30/23
30			Create project time schedule	3 days	Tue 1/31/23	Thu 2/2/23
31			Create project cost schedule	2 days	Sun 2/5/23	Mon 2/6/23
32			Cost checking	1 day	Tue 2/7/23	Tue 2/7/23
33			Risk control	3 days	Wed 2/8/23	Sun 2/12/23
34			Manage team members	3 days	Mon 2/13/23	Wed 2/15/23
35			 <b>Weekly Review Meeting</b>	<b>75 days</b>	<b>Mon 10/24/22</b>	<b>Mon 2/6/23</b>
36			Weekly Review Meeting 1	1 day	Mon 10/24/22	Mon 10/24/22
37			Weekly Review Meeting 2	1 day	Mon 10/31/22	Mon 10/31/22
38			Weekly Review Meeting 3	1 day	Mon 11/7/22	Mon 11/7/22
39			Weekly Review Meeting 4	1 day	Mon 11/14/22	Mon 11/14/22
40			Weekly Review Meeting 5	1 day	Mon 11/21/22	Mon 11/21/22
41			Weekly Review Meeting 6	1 day	Mon 11/28/22	Mon 11/28/22
42			Weekly Review Meeting 7	1 day	Mon 12/5/22	Mon 12/5/22
43			Weekly Review Meeting 8	1 day	Mon 12/12/22	Mon 12/12/22
44			Weekly Review Meeting 9	1 day	Mon 12/19/22	Mon 12/19/22
45			Weekly Review Meeting 10	1 day	Mon 12/26/22	Mon 12/26/22
46			Weekly Review Meeting 11	1 day	Mon 1/2/23	Mon 1/2/23
47			Weekly Review Meeting 12	1 day	Mon 1/9/23	Mon 1/9/23
48			Weekly Review Meeting 13	1 day	Mon 1/16/23	Mon 1/16/23
49			Weekly Review Meeting 14	1 day	Mon 1/23/23	Mon 1/23/23
50			Weekly Review Meeting 15	1 day	Mon 1/30/23	Mon 1/30/23
51			Weekly Review Meeting 16	1 day	Mon 2/6/23	Mon 2/6/23
52			 <b>Project Closing</b>	<b>15 days</b>	<b>Tue 2/14/23</b>	<b>Tue 3/7/23</b>
53			<b>Test the software</b>	5 days	Tue 2/14/23	Mon 2/20/23
54			Show prototype to the user	2 days	Thu 2/23/23	Sun 2/26/23
55			Take the user approval	2 days	Wed 3/1/23	Thu 3/2/23
56			Train the user to the system	5 days	Wed 3/1/23	Tue 3/7/23
57			Close the project	0 days	Tue 3/7/23	Tue 3/7/23

Figure 8: Question 4 picture.

After you do everything in the checklist above, you should do the followings:

## 5. You should set the tasks duration.















































		Task Mode ▾	Task Name ▾	Duration ▾	Start ▾	Finish ▾
1			<b>Health Tracking System</b>	<b>96 days</b>	<b>Sun 23/10/22</b>	<b>Tue 07/03/23</b>
2	✓		<b>Project initiaion</b>	<b>9 days</b>	<b>Sun 23/10/22</b>	<b>Wed 02/11/22</b>
3	✓		<b>Create Project Charter</b>	<b>5 days</b>	<b>Mon 24/10/22</b>	<b>Sun 30/10/22</b>
4	✓		Define the project objectives	2 days	Mon 24/10/22	Tue 25/10/22
5	✓		Define the project approach	3 days	Tue 25/10/22	Thu 27/10/22
6	✓		Create the skateholder register	1 day	Sun 30/10/22	Sun 30/10/22
7	✓		Define the project scope statement	1 day	Mon 31/10/22	Mon 31/10/22
8	✓		Hold kick off meeting	2 days	Tue 01/11/22	Wed 02/11/22
9	✓		Decision to proceed further	0 days	Wed 02/11/22	Wed 02/11/22
10			<b>Project Planning</b>	<b>20.88 days</b>	<b>Thu 03/11/22</b>	<b>Thu 01/12/22</b>
11			Project scope management	2 days	Thu 03/11/22	Mon 07/11/22
12			Collect requirements	4 days	Thu 03/11/22	Tue 08/11/22
13			Define project scope	2 days	Thu 03/11/22	Fri 04/11/22
14			Create work break down structure	3 days	Mon 28/11/22	Wed 30/11/22
15			Plan quality management	0 days	Thu 24/11/22	Thu 24/11/22
16			Identift risks and plan responses	5 days	Thu 24/11/22	Wed 30/11/22
17			Plan stakeholders management	1 day	Thu 01/12/22	Thu 01/12/22
18			<b>Project Execution</b>	<b>39 days</b>	<b>Tue 06/12/22</b>	<b>Sun 29/01/23</b>
19			<b>Build database</b>	<b>39 days</b>	<b>Tue 06/12/22</b>	<b>Sun 29/01/23</b>
20			Desgin the database ER	4 days	Tue 06/12/22	Sun 11/12/22
21			Implement the database with SQL	6.88 days	Sun 11/12/22	Mon 19/12/22
22			Test the data base SQL code	4.88 days	Mon 23/01/23	Sun 29/01/23
23			Design Interfaces	8 days	Mon 26/12/22	Thu 05/01/23
24			Design menues	2.88 days	Sun 08/01/23	Tue 10/01/23
25			Get tools	5 days	Wed 11/01/23	Tue 17/01/23
26			Build network	4 days	Tue 17/01/23	Sun 22/01/23
27			Link data	3 days	Mon 23/01/23	Wed 25/01/23
28			<b>Project Monitoring and Controlling</b>	<b>14 days</b>	<b>Thu 26/01/23</b>	<b>Wed 15/02/23</b>
29			Check the validation of project scope	3 days	Thu 26/01/23	Mon 30/01/23
30			Create project time schedule	3 days	Tue 31/01/23	Thu 02/02/23
31			Create project cost schedule	2 days	Sun 05/02/23	Mon 06/02/23
32			Cost checking	1 day	Tue 07/02/23	Tue 07/02/23
33			Risk control	3 days	Wed 08/02/23	Sun 12/02/23
34			Manage team members	3 days	Mon 13/02/23	Wed 15/02/23
35			<b>Weekly Review Meeting</b>	<b>94 days</b>	<b>Wed 26/10/22</b>	<b>Tue 07/03/23</b>
36			<b>Project Closing</b>	<b>15 days</b>	<b>Tue 14/02/23</b>	<b>Tue 07/03/23</b>
37			Test the software	5 days	Tue 14/02/23	Mon 20/02/23
38			Show prototype to the user	2 days	Thu 23/02/23	Sun 26/02/23
39			Take the user approval	2 days	Wed 01/03/23	Thu 02/03/23
40			Train the user to the system	5 days	Wed 01/03/23	Tue 07/03/23
41			Close the project	0 days	Tue 07/03/23	Tue 07/03/23

Figure 9: Question 5 picture.

6. You should configure the relationships between subtasks (at least 2 types).

FS type:



























20			Desgin the database ER	4 days	Tue 06/12/22	Fri 09/12/22	
21			Implement the database with SQL	6.88 days	Sun 11/12/22	Mon 19/12/22	20

SS type:

15			Plan quality management	0 days	Thu 24/11/22	Thu 24/11/22	
16			Identift risks and plan responses	5 days	Thu 24/11/22	Wed 30/11/22	15

Figure 10: Question 6 picture.

7. You should configure the relationships between the summary tasks FS type summary.

		Task Name	Duration	Start	Finish	Predecessors	Resource Names	Add New
1		Health Tracking System	96 days	Sun 23/10/22	Tue 07/03/23			
2		Project initiaion	9 days	Sun 23/10/22	Wed 02/11/22			
3		Create Project Charter	5 days	Mon 24/10/22	Sun 30/10/22			
4		Define the project objectives	2 days	Mon 24/10/22	Tue 25/10/22			
5		Define the project approach	3 days	Tue 25/10/22	Thu 27/10/22			
6		Create the skateholder register	1 day	Sun 30/10/22	Sun 30/10/22			
7		Define the project scope statement	1 day	Mon 31/10/22	Mon 31/10/22			
8		Hold kick off meeting	2 days	Tue 01/11/22	Wed 02/11/22			
9		Decision to proceed further	0 days	Wed 02/11/22	Wed 02/11/22			
10		Project Planning	20.88 days	Thu 03/11/22	Thu 01/12/22	2		
11		Project scope management	2 days	Thu 03/11/22	Mon 07/11/22			
12		Collect requirements	4 days	Tue 08/11/22	Mon 14/11/22			
13		Define project scope	2 days	Tue 15/11/22	Thu 17/11/22			
14		Create work break down structure	3 days	Sun 20/11/22	Wed 23/11/22			
15		Plan quality management	1 day	Thu 24/11/22	Thu 24/11/22			
16		Identift risks and plan responses	5 days	Thu 24/11/22	Wed 30/11/22			
17		Plan stakeholders management	1 day	Thu 01/12/22	Thu 01/12/22			
18		Project Execution	36 days	Tue 06/12/22	Wed 25/01/23	10		
19		Build database	14 days	Tue 06/12/22	Sun 25/12/22			
20		Desgin the database ER	4 days	Tue 06/12/22	Fri 09/12/22			
21		Implement the database with SQL	6.88 days	Sun 11/12/22	Mon 19/12/22	20		
22		Test the data base SQL code	4.88 days	Tue 20/12/22	Sun 25/12/22			
23		Design Interfaces	8 days	Mon 26/12/22	Thu 05/01/23			
24		Design menus	2.88 days	Sun 08/01/23	Tue 10/01/23			
25		Get tools	5 days	Wed 11/01/23	Tue 17/01/23			
26		Build network	4 days	Tue 17/01/23	Sun 22/01/23			



	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
3	✓	▢ Create Project Charter	5 days	Mon 24/10/22	Sun 30/10/22		
4	✓	Define the project objectives	2 days	Mon 24/10/22	Tue 25/10/22		
5	✓	Define the project approach	3 days	Tue 25/10/22	Thu 27/10/22		
6	✓	Create the skateholder register	1 day	Sun 30/10/22	Sun 30/10/22		
7	✓	Define the project scope statement	1 day	Mon 31/10/22	Mon 31/10/22		
8	✓	Hold kick off meeting	2 days	Tue 01/11/22	Wed 02/11/22		
9	✓	Decision to proceed further	0 days	Wed 02/11/22	Wed 02/11/22		
10		▢ Project Planning	20.88 days	Thu 03/11/22	Thu 01/12/22		
11		Project scope management	2 days	Thu 03/11/22	Mon 07/11/22		
12		Collect requirements	4 days	Tue 08/11/22	Mon 14/11/22		
13		Define project scope	2 days	Tue 15/11/22	Thu 17/11/22		
14		Create work break down structure	3 days	Sun 20/11/22	Wed 23/11/22		
15		Plan quality management	1 day	Thu 24/11/22	Thu 24/11/22		
16		Identift risks and plan responses	5 days	Thu 24/11/22	Wed 30/11/22		
17		Plan stakeholders management	1 day	Thu 01/12/22	Thu 01/12/22		
18		▢ Project Execution	36 days	Tue 06/12/22	Wed 25/01/23	10	
19		▢ Build database	14 days	Tue 06/12/22	Sun 25/12/22		
20		Desgin the database ER	4 days	Tue 06/12/22	Fri 09/12/22		
21		Implement the database with SQL	6.88 days	Sun 11/12/22	Mon 19/12/22	20	
22		Test the data base SQL code	4.88 days	Tue 20/12/22	Sun 25/12/22		
23		Design Interfaces	8 days	Mon 26/12/22	Thu 05/01/23		
24		Design menus	2.88 days	Sun 08/01/23	Tue 10/01/23		
25		Get tools	5 days	Wed 11/01/23	Tue 17/01/23		
26		Build network	4 days	Tue 17/01/23	Sun 22/01/23		
27		Link data	3 days	Mon 23/01/23	Wed 25/01/23		
28		▢ Project Monitoring and Controlling	14 days	Thu 26/01/23	Wed 15/02/23		

Ready New Tasks : Manually Scheduled

Figure 11: Question 7 picture.

## 8. Project should contain some Milestones (at least 2 milestones).

Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Add New
✓	▢ Health Tracking System	96 days	Sun 23/10/22	Tue 07/03/23			
✓	▢ Project initiaion	9 days	Sun 23/10/22	Wed 02/11/22			
✓	▢ Create Project Charter	5 days	Mon 24/10/22	Sun 30/10/22			
✓	Define the project objectives	2 days	Mon 24/10/22	Tue 25/10/22			
✓	Define the project approach	3 days	Tue 25/10/22	Thu 27/10/22			
✓	Create the skateholder register	1 day	Sun 30/10/22	Sun 30/10/22			
✓	Define the project scope statement	1 day	Mon 31/10/22	Mon 31/10/22			
✓	Hold kick off meeting	2 days	Tue 01/11/22	Wed 02/11/22			
✓	Decision to proceed further	0 days	Wed 02/11/22	Wed 02/11/22			
	▢ Project Planning	20.88 days	Thu 03/11/22	Thu 01/12/22			
	Project scope management	2 days	Thu 03/11/22	Mon 07/11/22			
	Collect requirements	4 days	Tue 08/11/22	Mon 14/11/22			
	Define project scope	2 days	Tue 15/11/22	Thu 17/11/22			
	Create work break down structure	3 days	Sun 20/11/22	Wed 23/11/22			
	Plan quality management	1 day	Wed 23/11/22	Wed 23/11/22			
	Identift risks and plan responses	5 days	Thu 24/11/22	Wed 30/11/22	15		
	Plan stakeholders management	1 day	Thu 01/12/22	Thu 01/12/22			
	▢ Project Execution	36 days	Tue 06/12/22	Wed 25/01/23			
	▢ Build database	14 days	Tue 06/12/22	Sun 25/12/22			
	Desgin the database ER	4 days	Tue 06/12/22	Fri 09/12/22			
	Implement the database with SQL	6.88 days	Sun 11/12/22	Mon 19/12/22	20		
	Test the data base SQL code	4.88 days	Tue 20/12/22	Sun 25/12/22			
	Design Interfaces	8 days	Mon 26/12/22	Thu 05/01/23			
	Design menus	2.88 days	Sun 08/01/23	Tue 10/01/23			
	Get tools	5 days	Wed 11/01/23	Tue 17/01/23			
	Build network	4 days	Tue 17/01/23	Sun 22/01/23			

1	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Add New
		<b>Build database</b>	<b>14 days</b>	<b>Tue 06/12/22</b>	<b>Sun 25/12/22</b>			
		Design the database ER	4 days	Tue 06/12/22	Fri 09/12/22			
		Implement the database with SQL	6.88 days	Sun 11/12/22	Mon 19/12/22	20		
		Test the data base SQL code	4.88 days	Tue 20/12/22	Sun 25/12/22			
		Design Interfaces	8 days	Mon 26/12/22	Thu 05/01/23			
		Design menus	2.88 days	Sun 08/01/23	Tue 10/01/23			
		Get tools	5 days	Wed 11/01/23	Tue 17/01/23			
		Build network	4 days	Tue 17/01/23	Sun 22/01/23			
		Link data	3 days	Mon 23/01/23	Wed 25/01/23			
		<b>Project Monitoring and Controlling</b>	<b>14 days</b>	<b>Thu 26/01/23</b>	<b>Wed 15/02/23</b>			
		Check the validation of project scope	3 days	Thu 26/01/23	Mon 30/01/23			
		Create project time schedule	3 days	Tue 31/01/23	Thu 02/02/23			
		Create project cost schedule	2 days	Sun 05/02/23	Mon 06/02/23			
		Cost checking	1 day	Tue 07/02/23	Tue 07/02/23			
		Risk control	3 days	Wed 08/02/23	Sun 12/02/23			
		Manage team members	3 days	Mon 13/02/23	Wed 15/02/23			
		<b>Project Closing</b>	<b>13 days</b>	<b>Thu 16/02/23</b>	<b>Tue 07/03/23</b>			
		Test the software	5 days	Thu 16/02/23	Wed 22/02/23			
		Show prototype to the user	2 days	Thu 23/02/23	Sun 26/02/23			
		Take the user approval	2 days	Mon 27/02/23	Tue 28/02/23			
		Train the user to the system	5 days	Wed 01/03/23	Tue 07/03/23			
		<b>Close the project</b>	<b>0 days</b>	<b>Tue 07/03/23</b>	<b>Tue 07/03/23</b>			

Figure 12: Question 8 picture.

9. Project should contain a recurring task that should be repeated once a week on Monday until the finish date.

35		<b>Weekly Review Meeting</b>	<b>75 days</b>	<b>Mon 10/24/22</b>	<b>Mon 2/6/23</b>
36		Weekly Review Meeting 1	1 day	Mon 10/24/22	Mon 10/24/22
37		Weekly Review Meeting 2	1 day	Mon 10/31/22	Mon 10/31/22
38		Weekly Review Meeting 3	1 day	Mon 11/7/22	Mon 11/7/22
39		Weekly Review Meeting 4	1 day	Mon 11/14/22	Mon 11/14/22

Recurring Task Information

Task Name: Weekly Review Meeting

Duration: 1d

Recurrence pattern

☐ Daily
 ☒ Weekly
 ☐ Monthly
 ☐ Yearly

Recur every 1 week(s) on:
 

☐ Sunday
 ☒ Monday
 ☐ Tuesday
 ☐ Wednesday
 ☐ Thursday
 ☐ Friday
 ☐ Saturday

Range of recurrence

Start: Mon 10/24/22
 

☐ End after: 16 occurrences
 ☒ End by: Mon 2/6/23

Calendar for scheduling this task

Calendar: None
 ☐ Scheduling ignores resource calendars

Help

OK

Cancel

Figure 13: Question 9 picture.

10. Project should contain all 3 types (work, material and cost) of resources and enter all their information in resource sheet.

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Code	Add New Column
1	Ahmad Alamri	Work		A	Project Manage	100%	250.00 ر.س./hr	270.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
2	Fatima Ali Omar	Work		F	Programmer	100%	150.00 ر.س./hr	170.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
3	Nuha Mohammed	Work		N	Programmer	100%	150.00 ر.س./hr	170.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
4	Nada Abdurahman	Work		N	Technical	100%	130.00 ر.س./hr	150.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
5	Reem Alghamdi	Work		R	Technical	100%	150.00 ر.س./hr	170.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
6	Osama Ali Salim	Work		O	Technical	100%	150.00 ر.س./hr	170.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
7	Zyad Ahmad	Work		Z	Technical	100%	150.00 ر.س./hr	170.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
8	Khalid Abdullah	Work		K	Management	100%	170.00 ر.س./hr	200.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
9	Saleh Alharbi	Work		S	Management	100%	170.00 ر.س./hr	200.00 ر.س./hr	0.00 ر.س.	Prorated	Health Tracking System		
10	Computers	Work		C	Equipment	100%	0.00 ر.س./hr	0.00 ر.س./hr	0.00 ر.س.	Prorated	Standard		
11	Database server	Work		D		100%	70.00 ر.س./day	0.00 ر.س./hr	0.00 ر.س.	Prorated	Standard		
12	Printer	Material	Buying	P	Tools		300.00 ر.س.		0.00 ر.س.	Prorated			
13	Printer ink	Material	Bottle	P	Tools		150.00 ر.س.		0.00 ر.س.	Prorated			
14	Internet subscription	Work		I		100%	180.00 ر.س./hr	0.00 ر.س./hr	0.00 ر.س.	Prorated	Standard		
15	Training the employees of the company	Cost		T						Prorated			

Figure 14: Question 10 picture.

11. At least one task has semi-flexible constraint, and another task has inflexible constraint.

Inflexible:

Task Information ✕

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Test the data base SQL code Duration: 4.88 day ☐ Estimated

Constrain task

Deadline: NA

Constraint type: Must Start On Constraint date: Mon 23/01/23

Task type: Fixed Units ☐ Effort driven

Calendar: None ☐ Scheduling ignores resource calendars

WBS code: 1.3.1.3

Earned value method: % Complete

☐ Mark task as milestone

Help OK Cancel

Semi-Flexible constraint:

Task Information ✕

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Create work break down structure Duration: 3 days ☐ Estimated

Constrain task

Deadline: NA

Constraint type: Finish No Later Than Constraint date: 01/12/2022

Task type: Fixed Units ☐ Effort driven

Calendar: None ☐ Scheduling ignores resource calendars

WBS code: 1.2.4

Earned value method: % Complete

☐ Mark task as milestone

Help OK Cancel

Figure 15: Question 11 picture.

12. Set type of one task as fixed duration and other task as fixed work.

Fixed Duration:

The screenshot shows the 'Task Information' dialog box with the 'General' tab selected. The task name is 'Collect requirements' and the duration is '4 days'. The 'Constrain task' section shows 'Deadline' as 'NA' and 'Constraint type' as 'As Soon As Possible'. The 'Task type' is set to 'Fixed Duration'. Other options like 'Effort driven', 'Scheduling ignores resource calendars', 'Calendar', 'WBS code', and 'Earned value method' are also visible.

Task Information

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Collect requirements Duration: 4 days ☐ Estimated

Constrain task

Deadline: NA

Constraint type: As Soon As Possible Constraint date:

Task type: Fixed Duration ☐ Effort driven

Calendar: None ☐ Scheduling ignores resource calendars

WBS code: 1.2.2

Earned value method: % Complete

☐ Mark task as milestone

Help OK Cancel

Fixed Work:

The screenshot shows the 'Task Information' dialog box with the 'General' tab selected. The task name is 'Define project scope' and the duration is '2 days'. The 'Constrain task' section shows 'Deadline' as 'NA' and 'Constraint type' as 'As Soon As Possible'. The 'Task type' is set to 'Fixed Work'. Other options like 'Effort driven', 'Scheduling ignores resource calendars', 'Calendar', 'WBS code', and 'Earned value method' are also visible.

Task Information

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Define project scope Duration: 2 days ☐ Estimated

Constrain task

Deadline: NA

Constraint type: As Soon As Possible Constraint date: NA

Task type: Fixed Work ☒ Effort driven

Calendar: None ☐ Scheduling ignores resource calendars

WBS code: 1.2.3

Earned value method: % Complete

☐ Mark task as milestone

Help OK Cancel

Figure 16: Question 12 picture.

13. At least one person of your resource has a multiple pay rate depend on task and you should attach these different pay rates to his tasks.

**Resource Information**

General Costs Notes Custom Fields

Resource Name: Fatima Ali Omar

Cost rate tables

For rates, enter a value or a percentage increase or decrease from the previous rate. For instance, if a resource's Per Use Cost is reduced by 20%, type -20%.

A (Default) B C D E

Effective Date	Standard Rate	Overtime Rate	Per Use Cost
--	150.00.ر.س./h	170.00.ر.س./h	0.00.ر.س.

Cost accrual: Prorated

Help Details... OK Cancel

Implement the d 56 hrs 6.88 days Sun 12/11/22 Mon 12/19/22

Fatima Ali On 56 hrs Sun 12/11/22 Mon 12/19/22

**Assignment Information**

General Tracking Notes

Task: Implement the database with SQL

Resource: Fatima Ali Omar

Work: 56h Units: 100%

Work contour: Flat

Start: Sun 12/11/22 Booking type: Committed

Finish: Mon 12/19/22 Cost: 8,400.00.ر.س.

Cost rate table: A Assignment Owner:

Some of the fields above are not editable because the task is Manually Scheduled.

OK Cancel

Fatima Ali Omar		Work		F		Programmer																																	
Resource Information																																							
General Costs Notes Custom Fields																																							
Resource Name: Fatima Ali Omar																																							
Cost rate tables																																							
For rates, enter a value or a percentage increase or decrease from the previous rate. For instance, if a resource's Per Use Cost is reduced by 20%, type -20%.																																							
A (Default) B C D E																																							
<table border="1"> <thead> <tr> <th>Effective Date</th> <th>Standard Rate</th> <th>Overtime Rate</th> <th>Per Use Cost</th> </tr> </thead> <tbody> <tr> <td>--</td> <td>250.00.ر.س./h</td> <td>350.00.ر.س./h</td> <td>0.00.ر.س.</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>								Effective Date	Standard Rate	Overtime Rate	Per Use Cost	--	250.00.ر.س./h	350.00.ر.س./h	0.00.ر.س.																								
Effective Date	Standard Rate	Overtime Rate	Per Use Cost																																				
--	250.00.ر.س./h	350.00.ر.س./h	0.00.ر.س.																																				
Cost accrual: Prorated																																							
Help Details... OK Cancel																																							
<table border="1"> <thead> <tr> <th>Test the data bas</th> <th>39 hrs 4.88 days</th> <th>Mon 1/23/23</th> <th>Sun 1/29/23</th> </tr> </thead> <tbody> <tr> <td>Fatima Ali On</td> <td>39 hrs</td> <td>Mon 1/23/23</td> <td>Sun 1/29/23</td> </tr> </tbody> </table>								Test the data bas	39 hrs 4.88 days	Mon 1/23/23	Sun 1/29/23	Fatima Ali On	39 hrs	Mon 1/23/23	Sun 1/29/23																								
Test the data bas	39 hrs 4.88 days	Mon 1/23/23	Sun 1/29/23																																				
Fatima Ali On	39 hrs	Mon 1/23/23	Sun 1/29/23																																				
Assignment Information																																							
General Tracking Notes																																							
Task: Test the data base SQL code																																							
Resource: Fatima Ali Omar																																							
Work: 39h Units: 100%																																							
Work contour: Contoured																																							
Start: Mon 1/23/23 Booking type: Committed																																							
Finish: Sun 1/29/23 Cost: 5,850.00.ر.س.																																							
Cost rate table: B Assignment Owner:																																							
OK Cancel																																							

Figure 17: Question 13 picture.



14. At least one person resource has a multiple pay rate depend on time.

Resource Information

General Costs Notes Custom Fields

Resource Name: Khalid Abdullah

Cost rate tables

For rates, enter a value or a percentage increase or decrease from the previous rate.  
For instance, if a resource's Per Use Cost is reduced by 20%, type -20%.

Effective Date	Standard Rate	Overtime Rate	Per Use Cost
--	170.00.ر.س./h	200.00.ر.س./h	0.00.ر.س.
Thu 03/11/22	180.00.ر.س./h	190.00.ر.س./h	0.00.ر.س.
Wed 22/02/23	170.00.ر.س./h	200.00.ر.س./h	0.00.ر.س.

Cost accrual: Prorated

Help Details... OK Cancel

Figure 18: Question 14 picture.

15. At least one task has a lead, and another task has a lag time.

Lead:

Task Information

General Predecessors Resources Advanced Notes Custom Fields

Name: Train the user to the system Duration: 5 days ☐ Estimated

Predecessors:

ID	Task Name	Type	Lag
39	Take the user approval	Finish-to-Start (FS)	-2d

Help OK Cancel



Lag:[illegible]

Figure 19: Question 15 picture.

